C.D. Howe Institute
Institut C.D. Howe

e-brief July 24, 2008

INDEPENDENT • REASONED • RELEVANT

New Tools for a Richer, Greener Future: Why Canadian Workers Need More Robust Business Investment

By Robin Banerjee and William B.P. Robson

- Canada lags its economic peers when it comes to investment in new plant and machinery for its workers.
- Countries with more capital investment per worker improve their competitive edge, raise living standards, and reduce environmental stress.
- Canada's underperformance on this measure underscores the need for tax and regulatory policies to spur private investment.

Improving Canadians' prosperity depends critically on investment in new plant and equipment. By speeding the adoption of new technology, higher rates of capital investment make Canadian products more competitive, and raise living standards. Countries with more capital per worker have higher incomes per worker.[1] The recent report of the Competition Review Panel underscored the importance of dynamic, productive firms. In a world where production organized along global value chains shifts easily across borders (Dymond and Hart 2008), and in which market-friendly policies and lower-wage workers are intensifying competition, Canadians need more state-of-the-art tools to preserve their competitive edge. New machines and equipment, moreover, are likely to cut waste, reduce environmental stress and raise living standards as well as produce better goods and services.

Troublingly, the numbers on capital formation, both for Canada as a whole and for many provinces, tell a story of underperformance. This *e-brief* updates a series of studies by the Institute that place Canada's capital investment performance in international perspective.[2] Over the past decade, business-sector capital formation in Canada has been consistently below the average for the G7, and is forecast to underperform the average for other OECD countries over 2008 and 2009. Despite economic weakness and credit-market turmoil in the United States, Canada

1 Sala-i-Martin (1997) showed a positive relationship between economic growth and investment in equipment and structures. Abdi (2004) presented evidence for Canada. De Long and Summers (1991) found a strong relation between machinery and equipment investment and growth in a study of a large sample of countries.

In the much-watched comparison of productivity between Canada and the United States, Rao (2003), Baldwin and Gu (2007) and Statistics Canada (2007) have identified capital intensity as a significant factor in the poor productivity performance north of the border.

2 See Robson and Goldfarb (2003, 2005, 2006) and Banerjee and Robson (2007) for previous years' results.

Table 1: Investment per Worker for Provinces, Canada, OECD, G7 and the US, 1998–2008

	Canadian dollars											Ratio to OECD average		Ratio to G7 average	
Province	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2007	2008	2007	2008
Alberta	17,444	16,172	19,097	20,316	18,975	19,960	22,288	28,339	30,680	30,750	30,543	272	264	263	258
B.C.	6,622	6,736	6,911	7,533	7,079	7,240	7,719	8,320	9,007	9,057	9,493	80	82	78	80
Manitoba	7,149	7,307	7,136	7,348	7,239	7,040	7,390	7,079	8,189	9,479	11,915	84	103	81	101
NB	6,250	8,175	7,980	6,098	5,873	6,590	6,895	7,478	7,791	8,528	8,220	75	71	73	70
Nfld.	10,442	13,582	11,843	10,942	10,063	11,602	13,915	15,026	14,441	12,133	14,581	107	126	104	123
Nova Scotia	7,923	9,847	7,798	8,006	8,215	7,505	7,049	7,294	8,029	7,585	8,217	67	71	65	70
Ontario	7,742	8,084	7,968	7,738	7,367	7,168	7,257	7,588	8,119	8,456	8,330	75	72	72	70
PEI	4,463	5,399	5,263	5,110	4,992	5,068	5,531	5,308	5,466	6,320	6,402	56	55	54	54
Quebec	6,412	6,942	7,107	6,547	6,316	6,432	6,966	6,597	6,854	7,201	7,540	64	65	62	64
Sask.	11,671	11,813	11,873	11,729	10,681	11,386	11,211	13,582	14,453	13,886	16,750	123	145	119	142
Canada	8,493	8,767	9,020	9,023	8,552	8,638	9,187	10,097	10,888	11,209	11,137	99	96	96	94
OECD	8,096	8,466	9,412	9,159	8,835	8,901	9,368	9,961	10,592	11,308	11,590	100	100	97	98
G7	8,558	8,889	9,858	9,603	9,104	9,136	9,648	10,329	10,967	11,670	11,817	103	102	100	100
US	9,505	10,114	11,099	10,465	9,604	9,608	10,195	10,894	11,655	12,335	12,481	109	108	106	106

Sources: OECD; Statistics Canada; authors' calculations.

is not closing the gap with its southern neighbour. Although data problems can complicate comparisons, Canada's failure to improve its standing against other developed countries, despite a healthy economy and robust saving, underscores the need for tax and regulatory policies that would spur private investment.

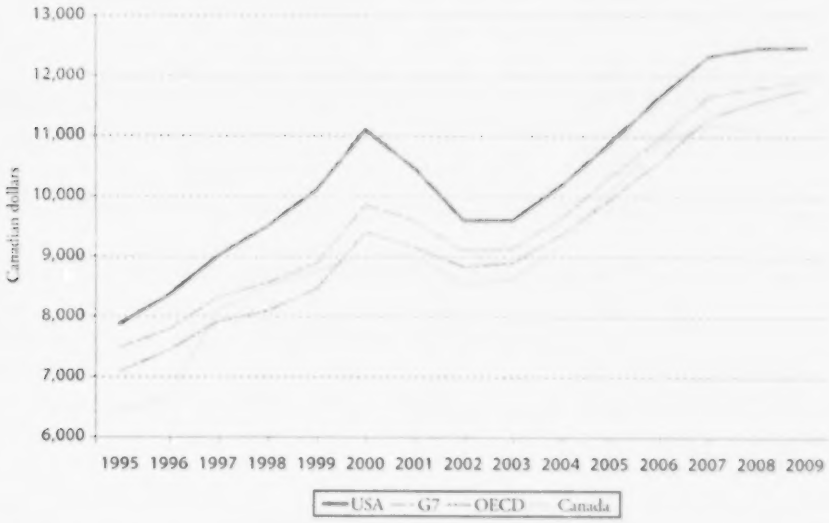
As in previous comparisons, we take historical and forecast data on business capital formation and employment from the OECD, and comparable data on Canada and the provinces from Statistics Canada.[3] We use purchasing-power-parity (PPP) exchange rates to allow Canadian-dollar comparisons of investment spending across countries, since market exchange rates typically do not offset differences in domestic price levels.[4]

The upshot: while the average Canadian worker can expect about $11,100 in new capital investment in 2008, rising to $11,400 in 2009, the average OECD worker will likely get about $11,600, rising to $11,800 in 2009. The average worker in the larger developed countries of the G7 will see $11,800 of capital investment in 2008, rising to $11,900 in 2009. In the

3 We used data from a subset of 23 OECD countries for which the OECD publishes business capital formation. Provincial data are from Statscan's Private and Public Investment in Canada, Intentions 2008. We use gross rather than net investment since depreciation is not comparable across countries, and because new technology may be embedded in replacement capital.

4 Capital-goods-specific PPP rates do not exist, which is unfortunate, since machinery and equipment prices are more likely to reflect exchange-rate swings than many other prices in the economy. As long as movements in capital-goods prices among countries are not too different from movements in general prices, however, the comparison is still informative.

Figure 1: Private Non-Residential Gross Fixed Capital Formation per Worker



Sources: OECD; authors' calculations.

United States, our closest neighbour and trading partner, the average worker should enjoy about $12,500 of investment in both 2008 and 2009. To put it starkly, for every dollar invested in the average OECD worker in 2008, his or her Canadian counterpart will receive 96 cents. For every dollar invested in the average G7 worker, his or her Canadian counterpart will receive 94 cents. And for every dollar invested in a US worker, his or her Canadian counterpart will receive 89 cents.[5] Table 1 presents the capital investment numbers for Canada and the provinces.

As Figure 1 shows, this underperformance relative to the United States and the G7 is not new. Worse, Canada's position has slipped by comparison with the broader sample of OECD countries – all this despite a stronger currency that has made imported machinery more affordable.

On a more encouraging note, a look at the performance of individual provinces reveals some important bright spots (Table 2). Part of the slippage in the national figure is due to a dip in investment per worker in Alberta, but from a level that is already very high: an Albertan worker can still expect to receive more than $2.45 of investment for every dollar received by his or her US counterpart. Saskatchewan and Newfoundland have also posted major improvements: Saskatchewan workers should enjoy $1.34 of investment per dollar received by their US counterparts, and the comparable figure for workers in Newfoundland and Labrador is $1.17. Over 50 percent of capital spending in Alberta, over 40 percent in Newfoundland and Labrador, and over 35 percent in Saskatchewan is in the mining, oil and gas sector, so all three provinces are capitalizing on the current resource boom.

Developments elsewhere in the economy are mixed. British Columbia and Manitoba should improve their situations relative to the United States in 2008, building on progress in recent years. The Maritime provinces continue to struggle, however, with investment per worker no better than two-thirds of the US level. While Quebec's 2008 figure, at 60 cents per dollar of investment for the typical US worker, is better than 2006 and 2007, it is still distressingly low. And very disappointingly, the average worker in Ontario will get less than 67 cents of investment for every US worker's dollar – a figure that is

5 These data include government business enterprises operating in a commercial environment, so state ownership should not distort comparisons. Larger differences in organization of activity could affect the comparisons – some health and education spending included in public-sector investment in Canada would appear under business investment in the United States, for example. But a comparison of total public- and private-sector investment in the two countries confirms the qualitative conclusion of Canadian underinvestment.

Table 2: Private Non-Residential Gross Capital Formation per Worker, US = 100

Province	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Alberta	183.5	159.9	172.1	194.1	197.6	207.7	218.6	260.1	263.2	249.3	244.7
British Columbia	69.7	66.6	62.3	72.0	73.7	75.4	75.7	76.4	77.3	73.4	76.1
Manitoba	75.2	72.2	64.3	70.2	75.4	73.3	72.5	65.0	70.3	76.8	95.5
New Brunswick	65.8	80.8	71.9	58.3	61.1	68.6	67.6	68.6	66.8	69.1	65.9
Nfld & Labrador	109.9	134.3	106.7	104.6	104.8	120.7	136.5	137.9	123.9	98.4	116.8
Nova Scotia	83.4	97.4	70.3	76.5	85.5	78.1	69.1	67.0	68.9	61.5	65.8
Ontario	81.5	79.9	71.8	73.9	76.7	74.6	71.2	69.7	69.7	68.6	66.7
PEI	47.0	53.4	47.4	48.8	52.0	52.7	54.2	48.7	46.9	51.2	51.3
Quebec	67.5	68.6	64.0	62.6	65.8	66.9	68.3	60.6	58.8	58.4	60.4
Saskatchewan	122.8	116.8	107.0	112.1	111.2	118.5	110.0	124.7	124.0	112.6	134.2
Canada	89.4	86.7	81.3	86.2	89.0	89.9	90.1	92.7	93.4	90.9	89.2
OECD	85.2	83.7	84.8	87.5	92.0	92.6	91.9	91.4	90.9	91.7	92.9
G7	90.0	87.9	88.8	91.8	94.8	95.1	94.6	94.8	94.1	94.6	94.7

Sources: OECD; Statistics Canada; authors' calculations.

down from more than 80 cents a decade ago. Given the share of Ontario's economy in the national total, Ontario's record bears much of the responsibility for the slippage in the figure for Canada as a whole. As Canadians are acutely aware, more countries are now competing for investment dollars around the world. Countries such as Brazil, China, India and Russia will close the gap between their incomes and those in more developed countries by adding to their capital stocks. A look at the data confirms the common impression that these emerging economies, although still far behind Canada, are closing the gap fast. Investment per person in these countries has gone from just over 10 percent to almost 20 percent of Canada's figure in the last 15 years. As these rising nations become ever more attractive locations for investment, Canada and each province will increasingly need to make the case for investment in terms that will be compelling to globally minded investors.

Canadians already have key advantages in attracting investment. Canada has a superb international reputation for its people, governance, and quality of life. Clearly, however, those advantages have not been enough to spur investment at the level other jurisdictions have enjoyed – so more is needed.

When it comes to business taxation, for example, recent years have seen some progress towards lower corporate and capital taxes, and there is fresh evidence that lower rates do spur investment (Parsons 2008). As Mintz (2007) documented, however, Canada's taxes on new capital investment remain among the highest in the world. A crucial change would be harmonization of the remaining provincial sales taxes with the federal GST – nowhere more important than in Ontario, where the existing sales tax adds about 9 percentage points to the effective tax rate on investment (Chen, Mintz and Tarasov 2007), and where the deterioration in new capital formation might legitimately be considered a national problem.

Regulatory reform will remain crucial as well. It is not unusual for sectors holding outstanding promise for high investment, innovative products and good jobs to be the targets of regulatory regimes of unusual complexity. The recent report of the Competition Review Panel (2008) highlighted sectors of the economy that need updated regulatory regimes. Telecommunications and financial services, for example, are areas where Canada likely has key advantages, and where innovative firms should not be constrained by regulatory regimes that predate our current era of global competition.

More robust investment in new plant and equipment is critical to a more prosperous and greener future in Canada, but Canadian workers are doing less well in this regard than their counterparts abroad. Canada's slippage in this bellwether measure of future prosperity should spur tax and regulatory changes that will ensure that future measures of relative performance will tell a happier story.

References:

Banerjee, Robin, and William B.P. Robson. 2007. "Give Canadian Workers the Tools to do the Job! Why Canada Needs More Robust Capital Investment." C.D. Howe Institute e-brief. May.

Baldwin, John and Wulong Gu. 2007. "Long-term Productivity Growth in Manufacturing in Canada and the United States, 1961 to 2003." *Canadian Productivity Review.* December.

Competition Review Panel. 2008. "Compete to Win." Industry Canada. Ottawa.

Dymond, Bill, and Michael Hart. 2008. *Navigating New Trade Routes: The Rise of Value Chains, and the Challenges for Canadian Trade Policy.* C.D. Howe Institute Commentary 259. March.

Goldfarb, Danielle, and William B.P. Robson. 2005. "Canadian Workers Need the Tools to Do the Job and Keep Pace in the Global Investment Race." C.D. Howe Institute e-brief. May.

Mintz, Jack. 2007. *The 2007 Tax Competitiveness Report: A Call for Comprehensive Tax Reform.* C.D. Howe Institute Commentary 254. September.

Parsons, Mark. 2008. "The Effect of Corporate Taxes on Canadian Investment: An Empirical Investigation." Department of Finance Working Paper 2008-01. Ottawa. May.

Robson, William B.P., and Danielle Goldfarb. 2004. "Tools for Workers: How Canada is Faring in the Competition for Capital Investment." C.D. Howe Institute Backgrounder 87. December.

——. 2006. "Canadian Workers Need Better Tools: Rating Canada's Performance in the Global Investment Race." C.D. Howe Institute e-brief. June.

Sala-i-Martin, Xavier. 1997. "I Just Ran Two Million Regressions." *The American Economic Review.* 87: no. 2 (Papers and Proceedings).

Statistics Canada. 2007. "Long-term Productivity Growth in Canada and the United States, 1961 to 2006." *Canadian Productivity Review.* August.

This *e-brief* is a publication of the C.D. Howe Institute.

For more information contact **William B.P. Robson,** President and CEO, or **Robin Banerjee,** Policy Analyst, C.D. Howe Institute, at 416-865-1904, e-mail cdhowe@cdhowe.org.

This *e-brief* is available at www.cdhowe.org.

Permission is granted to reprint this text if the content is not altered and proper attribution is provided.